

Patent Application of

Eric Wells

For

TITLE: UNIVERSAL LAPTOP CASE

CROSS-REFERENCE TO RELATED APPLICATIONS

Not applicable.

BACKGROUND -- FIELD OF INVENTION

The invention is an expandable universal fitting enclosure for peripherals of standardized computers and laptop components.

BACKGROUND -- DESCRIPTION OF PRIOR ART

One of the last shortcomings of the first portable computer cases since the late 70's is the lack of interchangeable parts. Originally, the shortcoming of portable computer cases were weight, power, and non-interchangeable parts.

Thereafter, inventors created several types of enclosure chassis units for flexibility and changeable modules to accomodate packaging U.S. Patent 6,206, 480 B1 to Thompson discloses a dual or single case mobility, computing and communication system with rapid mobility for usage in the field, consisting of a component mounting mechanism, a mobile computer and peripheral data switching micro-network, an enclosed modular peripheral power system, and a plug-in modular component card system. This system is not versatile enough and is limited for size to expand. U.S. Patent 5552957 to Brown is primarily a dual case solution with an option for a single cause configuration. He has an invention to provide a packaging structure for a portable computing system. However, this system is not user friendly.

Patent 4216522 to Slagel has an apparatus permitting a user of an apparatus to plug a selected integrated circuit mounted in a standard dual-inline package into a socket in some apparatus or by permitting the end user to plug an interchangeable printed socket in the apparatus. This is a clear-cut way to insert a circuit into an electronic device, but does not allow for modern computer peripherals.

Patent 3925710 to Ebert invention relates to electronic equipment packaging, and more particularly, to a standard, general purpose package that offers a wide degree of flexibility in interfacing a variety of existing and/or new electronic equipment without requiring a redesign of the package for each different application. This invention proves to be versatile for electronics, but not laptop computers.

Patent 5,936,380 to Parrish, an invention that relates generally to the use of power from solar cells in a connection with laptop, portable, and/or notebook computers. More particularly, the present invention relates to the manner in which solar cells can be used effectively in the electrical power system of such a computer. This design is effective in recapturing wasted light, but offers little in capturing light around the outside of the case.

Des. 430118 to Huriki et al. The portable computer is hearty designed, but has limited expansion. This unit is limited to overall outer size and expansion.

SUMMARY

The object of this invention is to provide an expandable, standardized, do-it-yourself, user-friendly computer case for laptops, notebooks, and tablets for multiple computer units in one case. It is also an object of the present invention to provide such a device that is of simple, inexpensive construction. Another object is to provide such a device in lightweight form that can be assembled and dis-assembled quickly, and is easy to transport.

A further object is to provide a universal fitting, physically expandable case that can hold one or more motherboards with knockout panels and supporting peripherals. The two units can operate separately or in a network with two to four multi-tasking systems on the two or more units.

Another principal object is the power feather prolonging the operational life of a battery power. Solar cells are incorporated onto the back of the computer display screen of a notebook/laptop computer to provide power to components and charging powering and/or regulation of a battery used for a power source.

OBJECTS AND ADVANTAGES

Universal Laptop Case, unlike present designs, is a proprietary computer case only for its system. The Universal Laptop Case will fit all systems and create new markets to use as multiple-based computers, instruments, test analysis systems and equipment.

- a. to provide a color enclosure that will be changeable.
- b. to provide an enclosure for a rapid change and mounting different components.
- c. to provide an enclosure which is both flexible and physically changeable.
- d. to provide an enclosure with several motherboards simultaneously and operating systems.
- e. to provide power, power saving features, using solar panels and battery regeneration.
- f. to provide three (3) main detachable units and reconfiguration into tablet or notebook.
- g. to provide a multi-tasking main frame network device, a multi-integrated, composing equipment utilization based computer, and dedicated controller board applications.

Further objects and advantages are to provide a closure, which can be used easily and conveniently. The bottom will have a handle to carry the entire case, the main overall horizontal parts. The three parts are the Top (outer section), Middle (center inner section), and the Body (outer section). The body shape can vary, but it will be mostly common rectangular shaped. There will be an elbow-joint to keep the top from opening too wide.

The top is a slim, narrow, lid on the upper half of the case or body. On the back and outer part of the lid is a solar cell panel. And, on the inner-part of the lid is the display screen with a camera, microphone, LDC, and light indicator. This lid is attached to a removable hinge that allows straight or bent configuration for a tablet or notebook. The lid contains a special plug that fits into a socket of the body of the case. These hinges are mounted to the lower back. Also, the case will have knockout panels on the outside of the base for expansion component placement.

The next section is the middle, which also has removable hinges on the backside. This section houses possibly, a rectangular section for mouse pads, speakers, light indicators, keyboards, LDC screen, and the remote radio section. This section, also, will have batteries for remote access power. There will, also, be a controller circuit in this section.

The last part is the bottom section, which, also, has removable hinges. It is the part that houses the motherboards, and peripherals. This section has expandable ends for component expansion. These expandable sections, which are on the long ends of this (possible) rectangular base, are detachable, sliding, heads, which physically expand the case for additional space. Each can slide seven inches to increase the case. The sliding part will have walls on the bottom and top that fits inside the main rectangle. There will be metal levers shaped like an "L" that will fit into a hole to stop parts from moving between where the two parts meet. There will be a wall with holes to run connections together. The top part will have a cover that covers the peripherals when separated. This cover can be moved back and forth by sliding it into grooves for access. In the very bottom of this section is the mounting board. The case will have knockout panels on the outside of the base for expansion component placement. On the inside of the main case, there will be a board in the bottom that will be fastened down by screws. This board is where the electronics and card will be connected. There are many holes to position it any place. These connections will use a push down button fastener and will release the components. Some cards will plug into the inner side of the bottom case.

The physical, expandable, customizing, configuring component chassis for laptops, tablets, notebooks, and hybrid notebooks transforms literally. The case is in three main parts: the top, upper lid, the middle, inner cover, and bottom housing. This removable upper lid houses the display screen on the inside and the solar cells on the back of the lid. The next section is the slim, narrow, middle, inner cover that holds the speakers, mouse pads, keyboards, LDC readout, and small display screen, and also, it is detachable from the top or bottom forming a configuration case. The bottom of the case has the physical, draw-like, expandable, slideable ends to the right and left of the front of the case and knockout panels, which will be for mounting the face of the peripherals. A unique part of the bottom will be the movable, sliding rails, snap-in components mounting to the removable mounting board, which will be screwed in to be secured.

ADVANTAGES

From the description above, a number of advantages of my Universal Laptop Case become evident:

- a. This will provide interchangeable plastic enclosure such as transparent and multi-colored ones.
- b. There will be no need to constantly buy new computer units every three to five years, just upgrade the internal motherboards, daughterboards, and software.
- c. The interchangeable plug and play cards will make the case into a special designated piece of equipment and not just a traditional computer.
- d. This will allow connection of several motherboards and daughterboards to operate on different aspects of a given task simultaneously.
- e. The computer case will truly allow itself to be multi-user from remote locations.
- f. This case will operate as a mini-main frame.
- g. This unit will act as a dedicated appliance by utilizing the daughterboards and networking other components in the case.
- h. It will have a solar cell for power management features and power enhancement to offset power consumption.
- i. It will be able to expand for excessive component integration and configuration, depending on the configuration and can be separated into three main parts: the display, the keyboard, the keyboard viewing section, and the bottom enclosure containing the peripherals.
- j. An internal, flexible, mounting system will allow many physical configurations for motherboard components and electronic controller circuits.
- k. This case will be lightweight, portable, and rugged.

CONCLUSION, RAMIFICATIONS, AND SCOPE

Accordingly, the reader will see that this case can enable the user to create many different computer configurations, use several operating systems test equipment, and dedicate controller cards for more than one user at the same time. This case will be a user-friendly case to create desired needed functions.

The case permits the use of several pieces of equipment with probes and lead wires.

The case permits an interaction with several pieces of test equipment software.

The case permits the expansion for a wireless system of several computer and test equipment in the same case.

The case permits for physical expansion to add many possible configurations of components.

The case permits power enhancement with solar cells.

Although the description above contains many specifics, these should not be construed as limiting the scope of the invention, but merely providing illustrations of some of the presently preferred embodiments of this invention. For example, the case can have other shapes, such as circular, oval, trapezoidal, triangular, cubicle, etc.

Thus, the scope of the invention should be determined by the appended claims and legal equivalents, rather than by the example given.

DESCRIPTION - FIGS 1-61 - PREFERRED EMBODIMENT

A preferred embodiment of the case of the present invention is illustrated on Sheet 1 (middle view). These sections are two parts of a three-part system. The top part is the solar panel on one side and the display screen on the other. The outside housing (33) of the top part has solar panels (34) centered on the back. There is a raised, bubbled edge (35) that protects the solar panel from damage. Also, embedded in the edge is a power light indicator (36a). On the opposite side of the solar panel, there is a low profile edge that fits tightly, but protects the display screen when disconnected from the middle. Sheet two (2) shows all three sections, the top, middle, and bottom. These pieces are held

together with an interlocking hinge (48). These hinges will allow each section of the case to open and close. Also, it will allow each unit to be disconnected independently for convenience and accessibility. This hinge will allow for the interchangeable position of the display screen so it may be utilized as a tablet.

On Sheet 6, at the bottom of the top section are the hinges to the case (40), also retractable feet (39). The feet will have a spring on the center, circular piece to help pull them to the unit. The outer part of the feet will have an angular part that will fit on the bottom side to hold the feet in place.

On the inner low profile edge are the controls to the display screen and light indicators (36), which set slightly lower than the protective edge. The display screen can operate as a whole or can be broken up into two single responding screens, which can operate independently. (37 & 38)

On the inside of the top piece are two different mounting types (Sheet 4). On the inside of back section with the side of the solar panel, is where the mounting frame is located, with a rubber piece (18) held in by a screw that holds the actual display screen in place. And, on the display side is the covering face (28) to the display screen, which is perforated (21) to accommodate the display screen size. The other CDL Mounting Unit (30) is a frame (25) that moves horizontally on a track (26) and are tightened by screws (22, 25, & 28) to hold the display screen in place, and vertical pieces (24) that are also tightened by brackets (23 & 27). There is a face cover (32) with knockout sections (31) to fit around the display screen (29)

The middle section has a handle (1, 45, 46, & 47) that retracts into the case. There is a space to the left and right of the handle, which has knockout panels (6). The top is the area in which most of the input devices are mounted. It can be lifted up to have access to the inside (16). There could be a mounted board (41) here, also. There is an area where one or more motherboards or one or more expansion slots can be placed. The case from the bottom has two mice (2) to use in controlling the display unit. Also, there are two speakers (3) at the bottom. The next section is the keyboard (4 & 5). The keyboard (4) on the right of the console will be stationary. The keyboard on the left (5) will be removable and will work by RF Frequency. It will have a built on mouse or tracker ball. The next part on the console will be the LDC Display (7 & 9) on the console with indicator lights (8 & 10). The inside of the